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THE RELATION OF READING ACHIEVEMENT TO ONE ASPECT OF "REALISM" AMONG 7- TO 12-YEAR-OLD BOYS.

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THIS INVESTIGATION STUDIED THE RELATIONSHIP BETWEEN READING ACHIEVEMENT AND MORAL REALISM IN 7- TO 12-YEAR-OLD BOYS. INTRAGROUP TRENDS AND INTERGROUP DIFFERENCES IN MORAL REALISM AMONG RETARDED AND SUCCESSFUL READERS WERE COMPARED AND EVALUATED. A HORIZONTAL ANALYSIS AND A VERTICAL ANALYSIS WERE PERFORMED IN ORDER TO DETERMINE THE PRESENCE OF A CERTAIN DEVELOPMENTAL TREND IN MORAL THINKING (STRUCTURING) IN SUCCESSFUL READERS THAT MAY NOT BE PRESENT IN RETARDED READERS. FROM THE DATA OBTAINED BY INTERVIEWS IT WAS FOUND THAT CHILDREN WHO ARE RETARDED IN READING ACHIEVEMENT ARE ALSO SOMEWHAT RETARDED IN MORAL-CONCEPTUAL DEVELOPMENT AS MEASURED IN PIAGET'S TERMS. THE STUDY SHOWED THAT THERE IS EVIDENCE OF A LAG IN MORAL REALISM IN RETARDED READERS WHEN THEY ARE COMPARED TO SUCCESSFUL READERS. (GD)

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THE RELATION OF READING ACHIEVEMENT TO ONE ASPECT OF "REALISM" AMONG SEVEN- TO TWELVE-YEAR-OLD BOYS

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CHAPTER I

THE PROBLEM

General Statement

The purpose in this investigation is to study the relationship between reading achievement and moral realism in seven- to twelve-year-old boys.

Hypotheses

Theoretical Foundations

Piaget's theory of cognitive development describes marked maturation in structuring of the environment at seven to eight years of age and at eleven to twelve years of age. The ability to abstract, and so, to utilize symbols, evolves from a "realistic," egocentric, concretistic orientation of the child below seven or eight years of age to the ability to abstract, generalize, and transfer symbolic learnings toward eleven or twelve years of age. Piaget's finding that the moral conceptions of seven- to eight-year-olds evidenced significantly greater moral realism than the moral conceptions of nine- to twelve-year-olds is basic to this study.

Piaget's theory regarding the "two moralities" of the child involves the development, after seven or eight years of age, from an egocentric, dogmatic upholding of seemingly arbitrary moral rules as ethical symbols, to the ability to evaluate moral rules and utilize them in the light of circumstances. The

ability to interpret printed symbols in their varying combinations with increasing skill should develop concomitantly. Thus, the nine- to twelve-year-old who is reading at a level commensurate with his intelligence can combine and recombine meaningful symbols in reading materials, forming words, sentences, and so forth. He might well be able to grasp the intrinsic properties of moral rules, as ethical symbols, and utilize them accordingly in different situations. However, the nine- to twelve-year-old who is reading below his ability level might be unable to conserve and transfer symbols in changing contexts, both in reading and in moral situations. Thus, the moral conceptions of nine- to twelve-year-old retarded readers should evidence significantly greater amounts of moral realism than the moral conceptions of nine- to twelve-year-old successful readers.

In this study an attempt will be made to study both intra-group trends and inter-group differences in moral realism among retarded and successful readers. A horizontal analysis will seek to discover statistically significant differences in thinking between retarded and successful readers. A vertical analysis will seek to discover the existence of "stages" in moral development by noting statistically significant declines in moral realism. This will be done in order to discover the presence of a certain developmental trend in moral thinking (structuring) in successful readers that may not be present in retarded readers.

Specific Hypotheses

(1) There will be no statistically significant difference between the occurrence of moral realism in the responses of seven- to eight-year-old retarded readers when compared with the responses of seven- to eight-year-old successful readers.

(2) There will be a statistically significant difference between the occurrence of moral realism in the responses of nine- to twelve-year-old retarded readers when compared with the responses of nine- to twelve-year-old successful readers. Significantly greater moral realism is expected among retarded readers.

(3) There will be a statistically significant difference among successful readers when the responses of sub-groups containing seven- to eight-year-olds and nine- to twelve-year-olds are compared, showing less moral realism in the nine- to twelve-year-old group.

(4) There will be no statistically significant difference among retarded readers when the responses of sub-groups containing seven- to eight-year-olds and nine- to twelve-year-olds are compared.

Operational Definitions

A retarded reader is one whose reading grade level, obtained on a standardized reading test, is one year or more below his expected reading grade level. The expected reading grade level will be found by subtracting five years from the mental age. Mental age will be determined by multiplying the chronological age (in months) by the I.Q. (expressed as a decimal), which has been obtained as a result of a standardized intelligence test.

A successful reader is one whose reading grade level is at or above his expectancy level, based upon the results of standardized reading and intelligence tests. The expected grade level will be calculated as described in the definition of a "retarded reader" above.

Realism is defined as the belief that things are what they seem to be and that one's own viewpoint conveys absolute reality. This is synonymous with the conception of "egocentric" thinking as centration upon, or the inability to go beyond, one's immediate perception of things.

Moral realism is defined as the belief in automatic obedience to moral rules without reasoning or judgment; one must not lie, steal, or damage. The bigger or more obvious the lie, the worse the crime. The larger or more disastrous the consequences, the worse the crime. Intentions or extenuating circumstances are not considered. There is belief in the efficacy of expiatory punishment; only severe punishment will produce the desired effect of preventing misdeeds. There is belief in immanent justice; the belief that punishments emanate automatically from things or situations themselves because moral laws are based upon the necessity for severe punishment. The children seem to think that there is a necessity for strict punishment in the very nature of things. This definition was adapted from Piaget's definitions and empirical work (6).

Areas of Moral Realism. Emanating from the definition above, are the six areas of moral realism which are examined in this study. Area A concerns the consequences of clumsiness; Area B concerns the consequences of the lie; Area C concerns immanent

justice; Area D concerns the efficacy of expiatory punishment; Area E concerns the content of the lie; and Area F concerns the consequences of stealing.

Two moralities of the child will be defined as two disparate moral ideologies. If moral rules are looked upon as coercive and due to unilateral respect (between superordinate rule-giver and subordinate rule-follower), the morality is one of constraint and heteronomy, characterized by moral realism. If moral rules are looked upon as rational and due to mutual respect (between equals), the morality is one of cooperation and autonomy. Within Piaget's theory of stages of moral development in the child, the coercive rule pervades moral thinking from inception of speech until seven or eight years of age, and the rational rule increasingly pervades moral thinking after eight years of age (6).

Stages in cognitive development may be described as hierarchical levels of cognitive development which proceed individually through processes of formation and attainment of equilibrium. Age boundaries for these levels constitute transitional periods preceded and followed by the higher occurrence of various kinds of thinking qualitatively designated as defining the particular level of thought.

Related Literature

In this study, the developmental cognitive theory of Piaget is related to current conceptions of reading ability as being part of the ability to learn, and reading retardation is viewed as a kind of learning disorder due to delayed or dysfunctioning cognitive development.

Piaget views ability to structure reality as a series of "operations" or internalized actions upon the environment, and describes gradual evolution from concretistic, egocentric structuring of the environment to mature ability to grasp multiple perspectives and to abstract. Within this theoretical framework, concretistic cognitive "realism" pervading childish thinking until after seven or eight years of age is followed by an increasing ability to abstract and utilize symbolic learnings toward eleven or twelve years of age (5). Socially, the egocentric orientation involves "lack of differentiation between ego's and alter's point of view"; however, after seven or eight years of age, the child "acquires skill in interindividual relations within a cooperative framework" (2, p. 343).

Piaget's moral theory (6) is based upon hundreds of interviews with lower-class French-Swiss children. By studying their conceptions of moral rules, he discerned "two moralities" of the child. An early moral ideology, egocentric, absolutistic "moral realism," pervading ethical thinking until the age of seven or eight years, was followed by growing ability to empathize and flexibly utilize moral rules. Thus, an immature lack of ability to put oneself in another's place, combined with external imposition of moral rules, produced a strict, although non-comprehending application of these rules. Because these rules were not understood, they were not internalized and were not truly a part of the child's thinking. However, with gradual freeing from external constraint and more peer relationships after the age of eight years, the child gained the ability to put himself in the other's place and to

flexibly and autonomously apply these "thou shalt nots."

Current views of reading retardation can be demonstrated by several researchers. De Hirsch found poor abstract performance in retarded readers and pointed to maturational delay (1). Myklebust found a disorder or lag in the retarded reader's psychoneurological development (4). Vernon found a "fundamental cognitive incapacity" (8, p. 196), and explained, in the light of Piaget's work, that retarded readers retain the characteristics of immature cognitive "realism" in their inability "to think 'reversibly,' that is to say, to analyse the word shape into its letter shapes and re-synthesize their sounds to form the word sound, holding in mind what the word sound is like when it is broken up into letter sounds" (9, p. 146).

Utilizing data relating reading retardation with social or emotional maladjustment, Spache found negative, passive behavior toward authority and inability to establish reciprocal relationships with peers among retarded readers (7). Langman found retarded readers immature in social relationships and reasoned that they were unable to generalize and transfer symbolic social learnings (3). Wepman utilized Piaget's findings to reason that reading is a phase of social adaptation and the "dyslexic child . . . fails to develop the essential phase of cognitive maturation which permits the easy transition to ethnocentric adaptation" (10, p. 185).

The rationale of this study is forthcoming from the aforementioned current research. Piaget's conception of immature "realism" as pervading childish thinking serves to reinforce the idea that "mature" cognition and the ability to abstract the underlying theme of social rules implies the ability to modify these rules

in order to promote the well-being of others. Such "abstracting" implies a kind of "equilibrium" attained by a "mature" individual who is cognizant of the intrinsic nature of the social symbol, for example, a "rule" or any other symbol, and able to modify its form without losing cognizance of its intrinsic properties. A person might "identify" with parents, but modify and "use" their commandments in the light of extenuating circumstances, thereby transferring learnings to different situations by changing only their form, but not their nature. So with reading skills, a person able to combine and recombine symbols to form meaningful "wholes," for example, words, sentences, and paragraphs, will possess this ability to modify the form without losing grasp of the nature of the symbol, in this case, the individual letter of the alphabet. This "letter" may appear in many different combinations and relationships, but always possesses its own intrinsic qualities, thereby implying the existence of "constants" in the world of the cognitively "mature" in contrast to the uncertain world of the cognitively "immature."

The world of the "immature" is one of uncertain symbols and uncertain rules or norms, imposed by authority-figures. These intellectual and social "symbols" are not internalized, but merely touch the "immature" superficially. They are accepted as decreed, but cannot be "used" because circumstances change, and these arbitrary, meaningless, and thereby limited "symbols" cannot be interpreted and implemented. The child may perhaps fancifully be assimilating these learnings, but does not accommodate or change his thinking in order to grasp true realities. Perhaps that is why the

retarded reader manifests maladjustive tendencies; the ability to integrate and use social and intellectual learnings may be lacking. Thus, he may not be able to cope with either social or intellectual reality.

CHAPTER II

METHODOLOGY AND DATA COLLECTION

Instrumentation

The structured interview was used as the most similar, yet standardized, adaptation of Piaget's highly variable "clinical method." An instrument was designed containing twenty-four test items drawn from Piaget's work (6), or adaptations thereof, in the form of story-situations, followed by questions designed to elicit moral judgments from the members of the sample population. The structured interview is in Appendix I and a manual of instructions for the structured interview is in Appendix II. Construct validity was evaluated for the structured interview. Relevant data appear in the test manual in Appendix II. In order to determine the reliability of the structured interview, a pilot study was done during September through November, 1964. Relevant data appear in the test manual in Appendix II.

The Sample Population

The sample population consisted of 208 boys chosen by I.Q., age, and reading achievement to fulfill the following categories.

Category (1) 26 seven-year-old and 26 eight-year-old retarded readers; a total of 52 subjects.

Category (2) 26 seven-year-old and 26 eight-year-old successful readers; a total of 52 subjects.

Category (3) 13 nine-year-old, 13 ten-year-old, 13 eleven-year-old, and 13 twelve-year-old retarded

readers; a total of 52 subjects.

Category (4) 13 nine-year-old, 13 ten-year-old, 13 eleven-year-old, and 13 twelve-year-old successful readers; a total of 52 subjects.

The study was done in a lower-middle class suburban community, in two elementary schools and one junior high school. An attempt was made to "match" I.Q.'s between reading groups on each age level and "matching" was done as much as possible. The children were selected from information on school record cards concerning chronological age, Otis Intelligence Quotients, and paternal occupation. "Lower" levels 4-7 of the Warner Occupational Scale were utilized to select a lower-class sample population. Reading levels were determined from results on the Stanford Achievement Test which was administered to every grade in September and early October, 1965. The calculation of expectancy levels and the selection of successful and retarded readers was done as described in the Operational Definitions section of this study.

Collection of the Data

The structured interview was administered by the researcher to one boy at a time in private rooms or areas in the particular schools according to the procedures in the manual in Appendix II. Subjects' responses were recorded in shorthand by the researcher. All interviewing was done between October, 1965, and mid-February, 1966.

Analysis of the Data

All interviews were transcribed by the researcher and scored according to the instructions for scoring in the test manual.

Analysis of covariance was utilized to individually test each experimental hypothesis. This statistical method was used because I.Q.'s were not exactly matched between members of each reading achievement group on each age level; analysis of covariance was used in order to statistically "control" I.Q. as a factor.

The structured interview was evaluated in terms of reliability and validity. Reliability was estimated by the split-half technique and the Kuder-Richardson technique. Evaluations for construct validity included inter-correlations of areas of the structured interview; product-moment correlations of the whole test and areas of the test, with criteria of chronological age and reading achievement level.

CHAPTER III

RESULTS, INTERPRETATION, AND CONCLUSIONS

Evaluation of Experimental Hypotheses

The .05 level was the accepted level of difference for this study. Analysis of covariance revealed differences significant beyond the .05 level between all four experimental groups. The magnitude of the differences can be seen in Table I. Presentation and evaluation of the hypotheses will follow.

TABLE I

ANALYSIS OF COVARIANCE DATA FOR THE EXPERIMENTAL HYPOTHESES

Experimental Groups*	Degrees of Freedom	Mean Squares	F	Significance Level***	Mean Differences**
7-8 RR and 7-8 SR	1/101	77.98/11.42	6.828	.05	1.91
9-12 RR and 9-12 SR	1/101	501.27/19.20	26.11	.01	4.40
7-8 SR and 9-12 SR	1/101	1221.88/16.88	72.39	.01	7.03
7-8 RR and 9-12 RR	1/101	469.07/13.51	34.72	.01	4.28

*In all cases, SR = Successful Readers and RR = Retarded Readers.
**Differences between "corrected" means.
***F-value at .05 is 3.94; F-value at .01 is 6.90 for 1/100 degrees of freedom.

Hypothesis (1) This hypothesis states that there will be no statistically significant difference between the occurrence of moral realism in the responses of seven- to eight-year-old retarded readers when compared with the responses of seven- to eight-year-old successful readers.

Analysis of covariance revealed an F-value of 6.828. This hypothesis can be rejected at the .05 level. However, the F-value is approaching the .01 level which is 6.90. This is a significant discovery because the tests of all the other hypotheses revealed F-values of over 20. Thus, the F-value between the seven- to eight-year-old groups is much smaller than any of the others. A look at the "corrected" mean differences in Table I reveals a difference of only 1.91 between the mean moral realism scores of the retarded readers and the successful readers who are seven to eight years of age.

Hypothesis (2) This hypothesis states that there will be a statistically significant difference in the occurrence of moral realism in the responses of nine- to twelve-year-old retarded readers when compared with the responses of nine- to twelve-year-old successful readers. Significantly greater moral realism is expected among retarded readers.

Analysis of covariance revealed an F-value of 26.11 which is significant at the .01 level; this hypothesis is confirmed. Significantly greater moral realism was evident among the retarded readers. There is a difference of 4.40 between the "corrected" means of the two groups, the retarded readers having the higher mean score.

Hypothesis (3) This hypothesis states that there will be a statistically significant difference among successful readers when the responses of sub-groups containing seven- to eight-year-olds and nine- to twelve-year-olds are compared, showing less moral realism in the nine- to twelve-year-old group.

Analysis of covariance revealed an F-value of 72.39, which is significant at the .01 level; this hypothesis is confirmed. A statistically significant difference was found and there was less moral realism in the nine- to twelve-year-old group. There is a difference of 7.03 between the "corrected" means of the two groups, the higher mean belonging to the seven- to eight-year-old group.

Hypothesis (4) This hypothesis states that there will be no statistically significant difference among retarded readers when the responses of sub-groups containing seven- to eight-year-olds and nine- to twelve-year-olds are compared.

Analysis of covariance revealed an F-value of 34.72. This hypothesis can be rejected at the .01 level. There is a difference of 4.28 between the "corrected" means of the two groups, the higher mean belonging to the younger group. However, the difference here is smaller than that of the difference between the younger and older age groups among the successful readers.

The Structured Interview

Reliability coefficients were calculated for the internal consistency of the structured interview. The split-half method of computing reliability resulted in a reliability coefficient of .92. A Kuder-Richardson reliability coefficient was computed in order to

account for item heterogeneity. The Kuder-Richardson reliability coefficient was .81.

Construct validity was evaluated first by computing inter-area correlations in order to evaluate the integrity of the construct. The results are in Table II. The "areas" are those described in the Operational Definitions section of this study.

TABLE II

AREA INTERCORRELATIONS FOR THE STRUCTURED INTERVIEW (N=208)

Areas	A	B	C	D	E	F
A		+.73*	+.19*	-.08	+.41*	+.57*
B			+.25*	-.03	+.46*	+.48*
C				+.07	+.11	+.10
D					+.10	+.04
E						+.54*
F						

*Significant at the .01 level.

There were strong positive intercorrelations between Areas A, B, E, and F. Area C showed some nonsignificant and other low positive correlations with others, and Area D showed correlations which were low and not significant.

The evaluation of construct validity up to the time of this study consisted of validation studies relating moral realism to chronological age. At this time it was decided that the computation of product-moment correlations between the entire structured interview and its component areas with criteria of age and reading level

would serve as additional data for construct validity. These data would be more enlightening if correlations were also derived for the entire sample population, successful readers, and retarded readers. The resulting data are in Table III. Resulting correlations were significant at the .05 and .01 levels except in Area D which exhibited nonsignificant correlations of varying directions.

TABLE III

CORRELATION DATA: THE RELATION OF MORAL REALISM TO AGE AND READING ACHIEVEMENT FOR AREAS AND THE WHOLE TEST

Criteria	Areas: A	B	C	D	E	F	Whole Test
For the Entire Sample Population N=208							
Reading Level	-.68*	-.63*	-.31*	-.09	-.42*	-.48*	-.73*
Age	-.60*	-.56*	-.34*	-.06	-.40*	-.36*	-.63*
For Successful Readers N=104							
Reading Level	-.74*	-.73*	-.38*	-.09	-.40*	-.30*	-.72*
Age	-.67*	-.72*	-.39*	-.15	-.32*	-.51*	-.74*
For Retarded Readers N=104							
Reading Level	-.38*	-.35*	-.19**	+.03	-.22**	-.22**	-.43*
Age	-.48*	-.45*	-.31*	+.02	-.48*	-.21**	-.54*

*Significant at the .01 level.
**Significant at the .05 level.

The correlation of moral realism to age for the entire test was -.63 and to reading level was -.73 for the entire sample population. This high negative correlation revealed strongly decreasing moral realism with increasing age and reading level. Interesting results occurred when the results of the test were divided into those of retarded and successful readers. For successful readers, the

correlation between moral realism and reading level was -.72; the correlation between moral realism and age was -.74. For retarded readers the correlation between moral realism and reading level was -.43 and the correlation between moral realism and age was -.54. Thus, increasing age and reading level did not indicate the highly decreasing moral realism among retarded readers to the extent to which these factors affected moral realism among successful readers. The correlations between the test areas and the variables of age and reading level for the entire sample and sub-samples were calculated. Again, higher negative correlations were obtained for the successful readers and lower negative correlations were obtained for the retarded readers.

Interpretation of Experimental Results

Evaluation of the data by analysis of covariance revealed significant differences far beyond the .01 level between seven- to eight-year-old retarded readers and nine- to twelve-year-old retarded readers; between seven- to eight-year-old successful readers and nine- to twelve-year-old successful readers; and between nine- to twelve-year-old successful readers and nine- to twelve-year-old retarded readers. However, the significant difference between seven- to eight-year-old successful readers and seven- to eight-year-old retarded readers was only at the .05 level and approaching the .01 level. The smallest difference of 6.828, and the difference between corrected mean moral realism scores of under two points (see Table I), was between retarded and successful readers who are seven to eight years of age, with successful readers having the lower moral realism scores. However, the difference between these

retarded and successful readers increases to 26.11 among the nine- to twelve-year-olds. The difference between corrected mean scores at the older age groupings is over four points. Thus, the mean moral realism scores of retarded and successful readers, initially different, diverge even more with increasing age.

Differences within the reading achievement groups are also interesting. Within the retarded-reader group, the seven- to eight-year-olds have mean corrected scores which differ from those of nine- to twelve-year-olds by more than four points; the F-value here is 34.72. However, among the successful readers the F-value is 72.39 and the mean corrected score difference is over seven points. In both cases, the older children have lower moral realism scores; however, the amount (or rate?) of change is very different. The successful readers manifest a much greater decline in moral realism scores. It would seem that there is a lag in the rate of declining moral realism among retarded readers when they are compared with successful readers.

According to the data, children who are "retarded" in reading achievement are also somewhat "retarded" in moral-conceptual development as measured in Piaget's terms; a difference between retarded and successful readers in moral realism which is significant at seven to eight years of age increases sharply at nine to twelve years of age. Concurrently, the retarded reader has evolved from his highly morally realistic stage at seven to eight years of age to relatively low moral realism at nine to twelve years of age; however, the successful reader evinces an even greater decline in moral realism.

Obviously, both retarded and successful readers manifest significant declines in moral realism which seem indicative of developmental stages. However, these developmental patterns are characterized by differential rates of declining moral realism. Successful readers, initially lower in moral realism than retarded readers, seem to decline in moral realism thereafter at a more rapid rate than the retarded readers. Conversely, retarded readers "lag behind" successful readers in their rate of declining moral realism.

The Structured Interview

Reliability and validity data yielded satisfactory results in most areas. The split-half reliability coefficient of .92 for this study served to confirm the high split-half reliability coefficient of .93 resulting from the pilot study. The passable Kuder-Richardson reliability coefficient of .81 for this study was consistent with the Kuder-Richardson reliability coefficient of .83 obtained for the pilot study data. (The pilot study data are in Appendix II.) These coefficients indicate that the structured interview is capable of differentiating between individuals.

In order to test the integrity of the construct, moral realism, as defined for this study, intercorrelations between areas of the instrument were calculated. The areas of immanent justice and efficacy of expiatory punishment showed the lowest intercorrelations. Immanent justice showed low, but mostly significant correlations with other areas of the instrument, but expiatory punishment showed low and nonsignificant correlations with other areas. All other areas demonstrated marked and high area inter-

correlations. Construct validity also involved evaluation of the construct, moral realism, with regard to age and reading achievement; resulting negative correlations were quite high, being, respectively, -.63 and -.73. Thus, the construct, moral realism, declined significantly with criteria of increasing age and reading level. This evidence, reinforcing the evidence from the experimental hypotheses, serves as a validation of the construct for age and reading achievement. It would seem that the general ability to conceptualize about social situations is a function of the ability to utilize the symbolic data of reading and is a function of age. Correlations between interview areas and criteria of age and reading level revealed that chronological age was the more dominant determinant of declining moral realism among retarded readers. For the entire sample population, correlations in all areas except expiatory punishment, indicating the relation of the construct to the criterion, were fair to high and significant.

Conclusions and Implications

This study was an attempt to systematize aspects of Piaget's theory of ethical development and to construct a test to measure the variable of moral realism. It was also an attempt to relate Piaget's theory of ethical development to reading success and retardation. The theoretical basis of this study lay in the conception of an evolving intelligence based upon gradual separation from, and interaction between, the self and the environment, causing increasing ability to abstract and utilize symbolic learnings. For this study, this "intelligence" has been represented by symptoms of the ability to utilize ethical and

language symbols. Thus, it was hypothesized that the retarded reader, seven to twelve years of age, who obviously cannot flexibly utilize the language symbols used in reading in terms of cultural expectations, would manifest a "lag" in his ability to flexibly utilize ethical symbols, these being the moral norms or "thou shalt nots" of his culture. Conversely, the successful reader would be evolving at culturally-expected rates in his ability to flexibly utilize language symbols and ethical norms; these rates were to be in general agreement with the Piagetian contention that the child significantly gains the ability to abstract after eight years of age because there is significantly decreasing egocentrism manifested by significantly decreasing moral and intellectual realism. The study has been reasonably successful in both attempts. The sample population of retarded readers lagged somewhat behind the successful readers in declining moral realism. However, the retarded readers still confirmed the stage-hypothesis of Piaget; moral realism did significantly diminish among retarded readers after seven to eight years of age, whereas it was originally hypothesized that this stage-theory would only be upheld among the successful readers. With regard to the other aim of this study, the test of moral judgment in the form of a structured interview showed marked reliability and validity.

The moral judgment instrument in the form of a structured interview did differentiate groups of readers and levels of development. Of the six areas within this instrument only one area did not respond to age differences and it was felt that the situations cited in the area of the efficacy of expiatory punishment were perhaps yet a part of the child's life from which he

could not yet differentiate himself. Thus, in this area, subjects tended to "regress" to morally realistic responses. However, these subjects responded to questions in all other areas with responses anticipated by Piaget's work. Reliability coefficients were consistent with those obtained for the pilot study; the split-half reliability coefficient was .92 and the Kuder-Richardson reliability coefficient was .81. Obviously, when item heterogeneity was considered, the reliability was lowered; however, these reliability coefficients were still at a satisfactory level in comparison with reliability coefficients of current personality tests. The validity of the test was evaluated by inter-area correlations and by correlations of the whole test and areas of the test with chronological age and reading level. Correlations were marked and high between the whole test and the criteria of age and reading level. Correlations for successful readers were higher than those of retarded readers; however, most correlations were marked. Thus, the relation of age to moral realism was reaffirmed (except in the area of expiatory justice especially for retarded readers), and the relation of reading achievement to moral realism was discovered.

When the experimental hypotheses were evaluated, it was found that differences between all experimental groups were at or approaching the .01 level of significance. Considering the magnitude of the differences, however, it might be said that the moral realism scores of the seven- to eight-year-old retarded and successful readers were not too different; "corrected" means revealed a score difference of less than two points. Successively, nine- to twelve-year-old retarded readers and successful readers

had a greater difference in "corrected" score means; here the difference was under five points, as was also the somewhat higher difference between the retarded readers of seven to eight and nine to twelve years of age, which was still under five points. However, the greatest difference was between the successful readers who were seven to eight years of age and nine to twelve years of age; here the difference was over seven points, evidencing a deep decline in moral realism among successful readers. It would seem that the successful reader, initially lower in moral realism than the retarded reader, loses his moral realism at a faster rate than the retarded reader and evinces much less moral realism in his thinking at the age of twelve years than the retarded reader.

Thus, a contention that retarded readers and successful readers might be two different kinds of children might be upheld in that perhaps retarded readers and successful readers are at two different sub-levels of social intelligence. Differential maturation rates in broad age groups of seven to eight and nine to twelve would imply that somewhere, at some age level <u>within</u> these broad age categories, there should be a statistically significant decline in moral realism for one group that is not present in the other. As a result of this study, it can be said that there is evidence of a developmental lag in diminishing moral realism in retarded readers, if we compare them with successful readers. It would seem that the retarded reader is not as socially "intelligent" as the successful reader in the context of Piaget's theory. He seems to be progressing at a somewhat different rate; he is lagging behind the successful reader in social development although he is passing through basically the same pattern of development.

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APPENDIX I

THE STRUCTURED INTERVIEW

WHAT IS YOUR NAME?

HOW OLD ARE YOU?

NOW . . . I'M GOING TO ASK YOU SOME QUESTIONS. THESE QUESTIONS WILL BE IN THE FORM OF STORIES WHICH I WILL READ TO YOU AND ABOUT WHICH I WILL ASK YOU SOME THINGS. SOME OF THEM MAY BE LIKE THIS ONE: "A boy was walking along the street and he saw a cat." I MIGHT ASK YOU "What did the first boy see?" (LET THE CHILD ANSWER.) "What did the second boy see?" (LET THE CHILD ANSWER.) NEITHER THE PRINCIPAL NOR YOUR TEACHER OR YOUR PARENTS WILL KNOW YOUR ANSWERS TO THESE QUESTIONS. I AM ASKING YOU THESE QUESTIONS SO THAT I CAN FIND OUT WHAT YOU THINK ABOUT SOME THINGS . . .

O.K.?

#1

A boy was helping his father paint the walls of his bedroom. While he was helping his father cover the floor with newspapers so that it wouldn't get spotted, the boy accidentally knocked over a big can of paint and got a big spot of paint on the floor.

Another boy did not want to help his father paint the walls of his bedroom. When his father asked him to help, the boy got angry and ran out of the room. As he ran by, he knocked over a can with some paint in it and got a little spot of paint on the floor.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#2

A boy was invited to a party, but he couldn't go, so he asked his friend to go and have a good time. His friend went to that house, but there was no party. The mother there was very angry. She said that the party was to be held next week. So that boy's friend started to cry and ran home. The first boy had made a mistake.

Another boy wanted to play a trick on his friend. He told him that there was to be a party, which wasn't true. The friend went to that house and, of course, there was no party. But the mother there invited that boy's friend in for milk and cookies.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#3

Once there were two boys who were taking apples from someone else's apple tree. Suddenly the owner of the tree came along and the two boys ran away. The owner caught one of them. The other boy, going home by a roundabout way, crossed a river on an old, weak bridge and fell into the water.

If the boy had not taken the apples, would he have fallen into the water anyway? Why?

NOW -- ANOTHER QUESTION.

#4

A boy was playing with firecrackers one afternoon, even though he was not supposed to. His father worked nights and slept during the day. When the boy set off the firecrackers, the noise woke his father up. His father was very angry and he slapped him.

Another boy was also playing with firecrackers one afternoon even though he was not supposed to. His father also worked nights and slept during the day. When the boy set off the firecrackers, the noise woke his father up. This father was angry, but he didn't slap him. He said, "You know you are not supposed to play with firecrackers and, besides, waking me during the day is just as bad as if someone woke you after you were asleep at night."

The next day there were still firecrackers left and one of the boys set them off, waking his father again. The other boy did not play with the firecrackers again.

(1) Which boy was it who set off the firecrackers again, the one who had been slapped or the one who had been talked to?

(2) Why?

NOW -- ANOTHER QUESTION.

#5

A boy wanted very much to go for a ride in a car, but no one ever asked him. One day he saw a big, beautiful car in the street and would have loved to be inside it. So when he got home he told his mother a story about a man in a car who had stopped and taken him for a little drive. But it was not true; he had made it all up.

Another boy was playing in his room. His mother asked him to go on an errand for her. He didn't feel like going so he told his mother that his feet were hurting. But this was not true; his feet were not hurting him in the least.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#6

In a class of very little children, the teacher had forbidden them to sharpen their pencils themselves. Once, when the teacher had her back turned, a little boy took the knife from her desk and was going to sharpen his pencil. But he cut his finger.

If the boy had taken the knife with his teacher's permission, would he have cut himself anyway? Why?

NOW -- ANOTHER QUESTION.

#7

A little boy had a friend in another class. His friend was too sick to come to school so the boy went to his friend's teacher to tell him. The teacher said he was giving a test tomorrow on something the boy didn't hear. This boy telephoned his friend and said he was having a test tomorrow. When the friend asked him what it was to be about the little boy said, "The teacher didn't say." The next day the friend had to take the test and he failed it.

Another boy wanted to play a trick on a friend in his class. His friend was too sick to come to school and the teacher said they were having a test tomorrow. The boy telephoned his friend and said they were not having any tests that week. The next day the friend did not have to take the test because he had been absent.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#8

One day a small boy was walking home and he saw a little dog that frightened him very much. When he got home he told his mother that he had seen a dog that was as big as an elephant.

Another boy came home from school and told his mother that his teacher had given him a good mark. But this was not true; the teacher had not given him any marks at all either good or bad. His mother was very pleased and rewarded him.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#9

A boy had a friend who caught a pigeon and kept him in a cage. This boy thought the pigeon was very unhappy and he was always asking his friend to let him out. But the friend wouldn't. So one day when his friend wasn't there, the boy took the pigeon and let it fly away. He threw the cage into the river so his friend wouldn't shut another pigeon up in it again.

Another boy took some chocolates from his mother's favorite box of chocolates one day while his mother was not there. He hid and ate them up.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#10

A boy wanted his friend to meet him at the library. This friend had just moved into the neighborhood and didn't know the streets very well. The boy made a mistake in the directions and his friend could not find the library and got completely lost.

Another boy wanted to play a trick on his friend. He told him that he would meet him at the library, but he gave him the wrong directions. This friend had just moved into the neighborhood and didn't know the streets very well. But he watched the street signs and found the library anyway.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#11

A boy was walking with his little brother one day. Suddenly the little brother fell and cut his knee and began to cry. The boy wanted to help his brother, but he didn't have a handkerchief or any money so he walked into the five-and-ten-cent store, slipped a box of bandages into his pocket, ran out of the store, and gave the bandages to his little brother.

Another boy was walking down the street and he saw a pretty ball on someone's front step that he thought he might like to play with. He looked around and saw that no one was watching him. So he walked up to the step, took the ball, and quickly ran away.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#12

A boy didn't know the names of the streets very well. He was not sure where XY Avenue was. One day a man stopped him and asked him where XY Avenue was. The boy answered, "I'm not sure, but I think it's over there." But it wasn't there. The man completely lost his way and could not find the house he was looking for.

Another boy who knew the names of the streets very well was asked by a man where XY Avenue was. The boy decided to play a trick on the man so he said, "It's over there," and he pointed to the wrong street. But the man didn't get lost and managed to find his way again.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#13

A boy was in his room. He was called to eat dinner. He went into the dining room. But behind the door there was a chair and on the chair there was a tray with fifteen cups on it. He couldn't have known there was all this behind the door. He went in, the door knocked against the tray, bang went the fifteen cups, and they all got broken!

Another boy liked to eat chocolate cookies. One day his mother asked him not to eat any more cookies after lunch because she needed them for her guests. But when his mother was out of the room, he tried to take more cookies out of the closet. He was in such a hurry that he knocked over one cup. The cup fell down and broke.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#14

A boy couldn't draw very well but he would have liked very much to be able to draw. One day he was looking at a very lovely drawing that another boy had done and said, "I did that drawing."

Another boy was playing with the scissors one day when his mother was out and he lost them. When his mother came in he said that he hadn't seen them and hadn't touched them.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#15

A boy wanted to draw. He went to his father's desk and took his good writing paper, which his father had told him not to do. He scribbled all over it with colored chalk. The father was angry and he slapped him.

Another boy wanted to draw. He also went to his father's desk and took his good writing paper, which his father had told him not to do. He scribbled all over it with colored chalk. This father was angry, but he didn't slap him. He said, "It isn't nice of you to take my paper. You wouldn't like it if I took your toys while you were at school."

A few days later the two boys each found a pen in his backyard. It was his father's pen. One of the boys kept the pen for himself. The other boy took it back to his father.

(1) Which boy was it who kept his father's pen for himself, the one who had been slapped or the one who had been talked to?

(2) Why?

NOW -- ANOTHER QUESTION.

#16

A boy was hungry. He had many brothers and sisters and his parents were too poor to buy enough food. So he went into a supermarket and took a turkey while no one was looking. He ran out and brought the turkey to his family.

Another boy was walking through a five-and-ten-cent store one day and he noticed a comic book on a counter. He thought he might like to see it, so when no one was looking he took the comic book and quickly ran away.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#17

A boy took an apple from a fruitstand. He ate it. It was not ripe and he got a stomach ache.

If the boy had paid for the apple, would he have gotten the stomach ache anyway? Why?

NOW -- ANOTHER QUESTION.

#18

A small boy went to the rodeo with his father. When he was in school he told the children that he had seen horses that were as big as elephants and big cowboys that were ten feet tall.

Another boy had a brother who made a beautiful picture of a horse. One day this boy showed the picture to his teacher and said, "I made that picture." His teacher was very pleased and she gave him a good mark.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#19

A boy noticed that his father's fountain pen had no ink. This boy thought he might help his father and surprise him by filling his pen. But while he was doing it the ink spilled and he made a big spot on the table cloth.

Another boy took his father's fountain pen one day while his father was out. He played with the pen and then he made a little spot on the table cloth.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#20

A boy met a friend of his who was very poor. His friend told him that he had nothing to eat that day because there was no food in his house. So the boy went into a grocery, and as he had no money, he waited until the clerk wasn't watching him and he took a whole loaf of bread. He ran out and gave the bread to his friend.

Another boy went into a candy store. He saw a small piece of candy on the counter that he thought he might like to eat. When the clerk wasn't watching him he took the candy and quickly ran out of the store.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#21

A boy was talking in his class while the teacher was teaching a lesson. The teacher told him to be quiet, but this boy kept talking. The teacher got angry and slapped him.

Another boy in another class was also talking while the teacher was teaching a lesson. The teacher told him to be quiet, but this boy kept talking. The teacher was angry, but he didn't slap him. He said, "Will you stop talking now? You wouldn't like it if I didn't listen to you while you were saying something important."

The next day both boys started talking again. Both their teachers told them to be quiet. One boy stopped talking and paid attention. The other boy didn't stop talking.

(1) Which boy was it who talked again, the one who had been slapped or the one who had been talked to?

(2) Why?

NOW -- ANOTHER QUESTION.

#22

A little boy wanted to give his mother a nice present as a surprise, so he cut out a red valentine for her. But he didn't know how to use the scissors properly so he cut a big hole in his pants.

Another little boy took his mother's scissors one day while she was out. He played with the scissors. But he didn't know how to use the scissors properly so he cut a little hole in his pants.

(1) Were both boys equally bad?

(2) IF YES: Why?

(3) IF NO: Which boy was worse -- the first or the second?

(4) Why?

NOW -- ANOTHER QUESTION.

#23

Two boys went into a department store. They took things from the counters and stuffed them into their pockets. The store manager came running toward them shouting and calling them thieves. The boys ran out of the store and across the street. Suddenly a car came from around the corner and knocked them to the ground.

If the boys had paid for the things from the counters, would the car have knocked them over anyway? Why?

NOW -- ANOTHER QUESTION.

#24

A boy was playing with dishes even though he wasn't supposed to. He broke a cup. When his mother came in he said, "I didn't break the cup. It was the cat. She jumped up there." His mother knew this was a lie and she slapped him.

Another boy was also playing with dishes although he wasn't supposed to. He broke a cup. When his mother came in he said, "I didn't break the cup. It was the cat. She jumped up there." His mother knew this was a lie, but she didn't slap him. She said, "It isn't nice for you to tell lies. You wouldn't like it if I lied to you."

A few days later both boys were playing with matches. When their mothers came in one of them told a lie again and said he hadn't been playing with matches. The other boy didn't tell a lie.

(1) Which boy was it who told the lie again, the one who had been slapped or the one who had been talked to?

(2) Why?

THANK YOU VERY MUCH FOR BEING SO COOPERATIVE. AND PLEASE DON'T TELL ANYONE ELSE ABOUT THESE QUESTIONS SO THAT EVERYONE WILL GIVE ME THEIR <u>OWN</u> ANSWERS.

APPENDIX II

MANUAL FOR THE STRUCTURED INTERVIEW

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CHAPTER I

INTRODUCTION

This test of moral judgment in the form of a structured interview is an individual test using orally administered story-situations with concomitant questions designed to elicit statements in the form of moral judgments. At present, this instrument is positively scored when "immature" conceptions of morality--"moral realism"--are elicited. Piaget has defined and described this phenomenon in detail in the study from which this instrument was adapted (7). Piaget also generally described a "mature" morality, but delineated no specific criteria. Although, logically, these criteria might include responses manifesting an ideology opposite to the moral realism so carefully described (7, pp. 106-7), further validating research must be done to specifically delineate this "mature" morality.

Procedures for Administration

At the present time, this instrument is for research purposes only. The interviewer should know the age, sex, intelligence, social class, and cultural background of the subject so as to best interpret the results in terms of the theoretical and empirical foundations of the structured interview. The person administering this structured interview should have had professional experience as a teacher, psychologist, or guidance counselor. This is necessary for purposes of rapport during the interview and skill in analyzing the data obtained as a result of the interview.

This structured interview has been constructed for and standardized upon children who are seven to twelve years of age. Further information regarding the standardizing population is in Chapter IV of this manual. Researchers utilizing this structured interview for other kinds of subjects are advised to standardize the instrument with respect to their sample populations.

This instrument should be administered by only one interviewer to one child at a time in a room set aside for this purpose. It is advisable that no distractions be in the room, e.g., other people or highly attractive objects. The interviewer

should be seated adjacent to the subject and both should be seated on adult-sized chairs.

It is advisable that a tape recorder be available for this interview. This will permit better content analysis after the interview and also provide an ongoing dialogue for transcription. Also, the interviewer is thereby freed from taking notes during the interview or from the distracting effect of a third person taking notes.

At the beginning of the interview, the interviewer should informally greet the subject as he enters the room unless the subject has been escorted to the interviewing room by the interviewer. However, when the subject is seated, the interviewer can immediately start the interview. A standardized introduction to the interview, a standardized transitional remark between test items, and a standardized concluding remark are the only statements (other than the interview items) which the interviewer should make while administering this instrument. If a subject indicates a lack of clarity by his responses or seems to have forgotten the events of the story situations, the interviewer will say, "I'll repeat the question." The interviewer is to make no other statements while the interview is in progress.

This interview should take approximately twenty or twenty-five minutes. However, no time limit has been set for the administration of this instrument.

The numbers of the items and questions should not be read aloud during the interview. They are for scoring purposes only.

In item #12 of the interview, "XY Avenue" refers to a street commonly known to the residents of a community. The experimenter should substitute the name of a street commonly known to his subjects.

Explanations and Interpretation of Test Results

Piaget's moral theory was based upon hundreds of interviews with six- to twelve-year-old French-Swiss children from the lower socioeconomic classes in Geneva. By studying their conceptions of moral rules, he discerned "two moralities" of the child. An early moral ideology, egocentric, absolutistic "moral realism," pervaded ethical thinking until the age of seven or eight years, followed by increasing ability to empathize and

flexibly utilize moral rules. Thus, an immature lack of ability to put oneself in another's place, combined with external imposition of moral rules, produced a strict, although non-comprehending, application of these rules. Because these rules were not understood, they were not internalized and were not truly a part of the child's thinking. However, with gradual freeing from egocentrism and external constraint, and more peer relationships after the age of eight years, the child gained the ability to put himself in the other's place and to flexibly and autonomously apply the "thou shalt nots" mindful of the other's circumstances.

Thus, in terms of Piaget's experience, it may be expected that, when faced with a hypothetical situation in which two children violate a moral rule, the "realistic" child will judge both characters equally guilty, or the grosser violator guiltier, because of his inability to take intentions or extenuating circumstances into consideration. However, after the age of eight years, children may be expected increasingly to differentiate intentions and circumstances surrounding the various culprits and judge on the basis of their discernment.

Consequently, test results may be interpreted as indicative of the amount of moral realism in the child's thinking about the situations cited, this moral realism being an absolutistic conception of moral rules. This may, in turn, be indicative of egocentricity and rigidity of attitudes toward hypothetical situations necessitating moral decisions.

CHAPTER II

THEORETICAL AND EMPIRICAL FOUNDATIONS

For this instrument, moral realism is defined as a belief in automatic obedience to moral rules without reasoning or judgment, e.g., one must not lie, steal, or damage. The bigger or more obvious the lie, the worse the crime. The larger or more disastrous the consequences, the worse the crime. Intent or extenuating circumstances are not considered. There is belief in the efficacy of expiatory punishment: the belief that only severe punishment will produce the desired effect of preventing further misdeeds. There is belief in immanent justice: the belief that punishments emanate automatically from things or situations themselves because moral laws are based on the necessity for strict punishment. The children seem to think that there is a necessity for strict punishment in the very nature of things.

Conversely, the mature thinker, in Piaget's terms, who can grasp multiple perspectives, will judge acts in terms of intention and extenuating circumstances. He does not believe in the efficacy of severe punishment; rather, a talking-to is deemed more effective. There is no belief that severe punishments emanate from things themselves; rather, punitive-seeming events which follow misdeeds are the result of naturalistic causes which may or may not have occurred anyway, but were not specifically punishments for the culprit.

Research by Piaget (7) showed moral realism diminishing in children's judgments after seven or eight years of age. Corroborating research was done by Caruso (2), Lerner (3), Medinnus (6), Boehm and Nass (1), Liu (4), Mac Rae (5), and Ramonda (8). Piaget's work was done in Switzerland; Caruso's work was done in Belgium; and all other studies mentioned were done in the United States.

For this instrument, certain "areas" within moral thinking were examined. They are described below with studies corroborating Piaget's findings. Also cited are the test items to which each area refers.

AREA A: CONSEQUENCES OF CLUMSINESS. This includes test items 1, 13, 19, and 22. Story situations are presented in which one child who intends to do mischief or evil performs a deed which results in little or less disastrous damage; this child is coupled with one who, from good motives, performs a deed which results in greater or more disastrous damage. The morally realistic child will judge both characters equally bad or judge the worse child in terms of material results. A mature judgment would be in terms of the motive underlying the deed; thus, the worse would be the character who, however inconsequential the resulting damage, meant to do aimless or evil mischief. Diminishing moral realism after seven or eight years of age was found by Boehm and Nass (1), Liu (4), and Medinnus (6). Mac Rae (5) and Caruso (2) found mature responses increasing beyond these age levels.

AREA B: CONSEQUENCES OF THE LIE. This includes test items 2, 7, 10, and 12. Story situations are presented in which one child who intends to deceive performs a deed which results in no disastrous consequences; this child is coupled with one who unintentionally deceives with disastrous consequences. The morally realistic child will consider both lies equally bad or will show a disregard for the motive underlying the act of lying, and will be concerned only with the consequences of the lie. The more disastrous the consequences, the worse the lie, and the one who, however unintentionally, did the lying. A mature judgment would be in terms of the intention to deceive and so the worse character will be the one who intended to deceive. Diminishing moral realism after seven or eight years of age was found by Boehm and Nass (1), and Medinnus (6). Mac Rae (5) and Caruso (2) found mature responses increasing beyond these years.

AREA C: IMMANENT JUSTICE. This includes test items 3, 6, 17, and 23. Story situations are presented in which perpetrators of evil suffer some disability or unhappy event. The morally realistic child will state that these unhappy events were consequences of the evil or forbidden act, since punishments even emanate from things themselves; things of the universe and its moral forces cooperate in order to punish a culprit. This indicates belief in immanent justice. The mature judgment would be that the unhappy

events were not just consequences of, or punishment for, the preceding evil acts, but might have been due to naturalistic causes. Thus, the child who cut his finger as he took the knife from the teacher's desk might have cut his finger in his haste; however, he did not cut his finger simply because he took the knife, as punishment. Markedly diminishing moral realism after seven or eight years of age was found by Ramonda (8) and Lerner (3). Mac Rae (5) and Caruso (2) found increasing numbers of mature responses beyond these age levels.

AREA D: EFFICACY OF EXPIATORY PUNISHMENTS. This includes test items 4, 15, 21, and 24. Story situations are presented in which two characters perpetrate mischief or damage. One character is thereafter punished arbitrarily by slapping (expiatory punishment), while the other is just talked to or cautioned against doing more of this act. Then one of these two characters repeats the troublesome act; but which one? The morally realistic child will state the recidivist to be the one who was talked to because only punishment will prevent further misdeeds; punishment is seen as the necessary retribution of justice. However, the mature judgment would be that the recidivist is the one who was arbitrarily punished; he now repeated the act for spite or resentment at being punished and not being treated as an equal human being. Diminishing moral realism after the age of seven or eight years was found by Medinnus (6), Liu (4), and Lerner (3).

AREA E: CONTENT OF THE LIE. This includes test items 5, 8, 14, and 18. Story situations are presented in which the perpetrator of a deed with intent to deceive is coupled with one who unintentionally deceives. The morally realistic child will consider both lies equally bad or feel the more obvious lie or the more unlikely lie is worse, because the more the contents of the lie depart from reality, the worse it is. A mature judgment would be in terms of the doer's motivation or intention to deceive, and so the worse story character will be the one who intended to deceive. Diminishing moral realism after seven or eight years of age was demonstrated in studies by Lerner (3), Liu (4), and Medinnus (6).

AREA F: CONSEQUENCES OF STEALING. This includes test items 9, 11, 16, and 20. Story situations are presented in which the character who steals for no reason except perhaps personal gratification is coupled with one who steals for a beneficial motive. The morally realistic child will judge both thefts equally bad, or judge worse the character who perpetrates the bigger theft or steals the bigger or more expensive object. He is simply impressed by the consequences of the deed: the bigger the consequences of the theft, the worse the deed; the greater the infraction of rules, the worse the deed. However, a mature judgment would be in terms of intention, e.g., to help another creature or human being. Diminishing moral realism after seven or eight years of age was found by Liu (4), Medinnus (6), and Caruso (2).

CHAPTER III

SCORING PROCEDURES

A positive score is to be given to responses characterized by moral realism, as indicated below.

Each test item counts for only one score. Although test items contain more than one question, they are to be given a single score, as scoring instructions indicate, on the basis of the particular questions indicated. Questions not scored are only for purposes of the interviewer to determine comprehension and recollection of the events in the stories.

No score is to be given to responses not characterized by moral realism.

For researchers utilizing the split-half method of determining test reliability, a note follows each item, indicating the half into which responses to the particular item are to be placed: whether into Half I or Half II.

A POSITIVE SCORE (+) IS TO BE GIVEN FOR EACH ITEM IF RESPONSES ARE AS FOLLOW. (M.R. Answer = Morally Realistic Answer.)

ITEM (1) The Paint Stories -- Consequences of Clumsiness.

M.R. Answer: (1) Yes or (3) The first boy.

Split half I.

ITEM (2) The Party Stories -- Consequences of the Lie.

M.R. Answer: (1) Yes or (3) The first boy.

Split half II.

ITEM (3) The Bridge Story -- Immanent Justice.

M.R. Answer: That the boy fell into the water because they stole (that stressed with no explanation), or as punishment administered by the bridge, by God, or by some moral force, shows belief in immanent justice. "Naturalistic" explanations, e.g., he ran across the bridge, the bridge was weak, or the boy was running fast on the weak bridge, etc., receive no score.

Split half I.

ITEM (4) The Firecrackers Stories -- Efficacy of Expiatory Punishment.
M.R. Answer: (1) The boy who was talked to.
Split half II.

ITEM (5) The Errand and Car Stories -- Content of the Lie.
M.R. Answer: (1) Yes or (3) The first boy.
Split half II.

ITEM (6) The Knife Story -- Immanent Justice.
M.R. Answer: That the boy cut himself because he stole (that stressed with no explanation), or as punishment by the knife or God or some moral force, shows belief in immanent justice. "Naturalistic" explanation, e.g., because he used the knife, the knife was pulled out hastily or carelessly, or the knife was sharp, etc., receive no score.
Split half II.

ITEM (7) The Test Stories -- Consequences of the Lie.
M.R. Answer: (1) Yes or (3) The first boy.
Split half I.

ITEM (8) The Dog and School Stories -- Content of the Lie.
M.R. Answer: (1) Yes or (3) The first boy.
Split half II.

ITEM (9) The Pigeon and Chocolate Stories -- Consequences of Stealing.
M.R. Answer: (1) Yes or (3) The first boy.
Split half II.

ITEM (10) The Library Stories -- Consequences of the Lie.
M.R. Answer: (1) Yes or (3) The first boy.
Split half II.

ITEM (11) The Ball and Bandage Stories -- Consequences of Stealing.
M.R. Answer: (1) Yes or (3) The first boy.
Split half I.

ITEM (12) The Directions Stories -- Consequences of the Lie.
M.R. Answer: (1) Yes or (3) The first boy.
Split half I.

ITEM (13) The Cups Stories -- Consequences of Clumsiness.
M.R. Answer: (1) Yes or (3) The first boy.
Split half II.

ITEM (14) The Drawing and Scissors Stories -- Content of the Lie.
M.R. Answer: (1) Yes or (3) The first boy.
Split half I.

ITEM (15) The Stationery Stories -- Efficacy of Expiatory Punishment.
M.R. Answer: (1) The boy who was talked to.
Split half II.

ITEM (16) The Turkey and Comic Book Stories -- Consequences of Stealing.
M.R. Answer: (1) Yes or (3) The first boy.
Split half II.

ITEM (17) The Apple Story -- Immanent Justice.
M.R. Answer: That the boy got sick because he stole (that stressed with no further explanation), or as punishment by the bridge or God or some moral force, shows belief in immanent justice. "Naturalistic" explanations, e.g., he ate the apple, he took it hastily or ate it hastily, or ate an apple that was not ripe, etc., receive no score.
Split half I.

ITEM (18) The Rodeo Stories -- Content of the Lie.
M.R. Answer: (1) Yes or (3) The first boy.
Split half I.

ITEM (19) The Pen Stories -- Consequences of Clumsiness.
M.R. Answer: (1) Yes or (3) The first boy.
Split half I.

ITEM (20) The Bread and Candy Stories -- Consequences of Stealing.
M.R. Answer: (1) Yes or (3) The first boy.
Split half I.

ITEM (21) The Talking Stories -- Efficacy of Expiatory Punishment.
M.R. Answer: (1) The boy who was talked to.
Split half I.

ITEM (22) The Valentine and Scissors Stories -- Consequences of Clumsiness.

M.R. Answer: (1) Yes or (3) The first boy.

Split half II.

ITEM (23) The Car Story -- Immanent Justice.

M.R. Answer: That the car knocked them down because they stole (that stressed with no explanation), or as punishment by the car or God or some moral force, indicates belief in immanent justice. "Naturalistic" explanations, e.g., they ran across the street, they were not looking, or they ran too quickly, receive no score.

Split half II.

ITEM (24) The Cup and Matches Stories -- Efficacy of Expiatory Punishment.

M.R. Answer: (1) The boy who was talked to.

Split half I.

CHAPTER IV

EXPERIMENTAL RESULTS WITH THE STRUCTURED INTERVIEW

An exploratory study was done in a lower-income suburb in Spring, 1964, in order to adjust the vocabulary and phraseology of the instrument to a lower-income sample population of approximately 35 boys. The resulting structured interview was composed ot items adapted from, or duplicating in rationale, the items used by Piaget for his research. A "trial run" of the complete structured interview revealed diminishing moral realism with increasing age. Interviews with a sub-sample of six boys revealed a mean score of 19 for the seven- to eight-year-olds and a mean score of 9.5 for the nine- to twelve-year-old boys.

A pilot study was done in the same suburb in Fall, 1964, with a stratified sample of 108 lower-class, male, retarded and successful readers, seven through twelve years of age, "matched" as closely as possible for I.Q. on each age level. A resulting split-half reliability coefficient of .93 and a Kuder-Richardson reliability coefficient of .83 indicated that the instrument could be used to discriminate between individuals. Construct validity, evaluated from previous studies relating to the relation of moral realism to chronological age, was evaluated and is Chapter II of this manual. Mean moral realism scores diminished from 13.87 at seven to eight years of age to 8.47 at nine to twelve years of age for the entire pilot study sample population. This trend of decreasing moral realism with increasing age confirmed a similar trend discovered during the exploratory study and confirmed the validity data of Chapter II.

A study done in 1965-6 in order to discover whether significant differences in moral realism would appear among seven- to eight- and nine- to twelve-year-old successful and retarded readers revealed differences beyond the .01 level for three groups and beyond the .05 level between all four age-reading-achievement groups, as tested by analysis of covariance. (See Chapter III of this report.) Analysis of magnitudes of differences between the groups revealed a "lag" in diminishing moral realism among the retarded readers.

Several kinds of construct validity were evaluated. The product-moment correlation of chronological age to moral realism for the entire sample was -.63 and the correlation between reading level and moral realism for the entire sample was -.73; thus there was a strong negative correlation between the construct and the criteria of age and reading achievement level. Examination of the integrity of the construct revealed marked intercorrelations between areas A, B, E, and F. Area C (Immanent Justice) revealed low intercorrelations. Area D (Expiatory Punishment) revealed low nonsignificant correlations with other areas. Thus, validity in terms of age and reading level was revealed; the integrity of the construct was good in four areas; but more research should be done in Areas C and D.

Reliability data revealed a split-half reliability coefficient of .92 and a Kuder-Richardson reliability coefficient of .81. As in the pilot study, the reliability coefficients were satisfactory in comparison with reliability coefficients of current personality tests.

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